

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Anthony Green Examiner #: 63854 Date: 9/10/04
Request: 1755 Phone Number 30 Serial Number: 101759206
Box and Bldg/Room Location: 945 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

SCIENTIFIC REFERENCE BR
Sci. & Tech. Info. Cntr

SEP 10

Pat. & T.M. Office

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| | Type of Search | Vendors and cost where applicable |
|------------------------------------|-----------------------|-----------------------------------|
| Searcher: <u>EL</u> | NA Sequence (#) _____ | STN _____ |
| Searcher Phone #: _____ | AA Sequence (#) _____ | Dialog _____ |
| Searcher Location: _____ | Structure (#) _____ | Questel/Orbit _____ |
| Date Searcher Picked Up: _____ | Bibliographic _____ | Dr.Link _____ |
| Date Completed: <u>9-17-04</u> | Litigation _____ | Lexis/Nexis _____ |
| Searcher Prep & Review Time: _____ | Fulltext _____ | Sequence Systems _____ |
| Clerical Prep Time: _____ | Patent Family _____ | WWW/Internet _____ |
| Online Time: _____ | Other _____ | Other (specify) _____ |

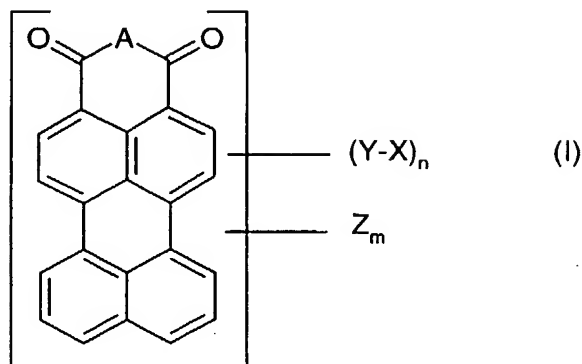
BASF Aktiengesellschaft

January 9, 2004
B01/0825US IB/KO/BrD/els

Claims

5

1. A perylene derivative of the formula (I)



10

where

A has the definition O, CH₂ or NR¹ with R¹ being H, aryl, aralkyl, heteroaryl, cycloalkyl, C₁-C₂₂ alkyl,

15

Y, each identical or different, is -CO₂, -CONR², -SO₃ or -SO₂NR², R² being H, aryl, aralkyl, heteroaryl, cycloalkyl, C₁-C₂₂ alkyl, preferably C₁-C₆ alkyl, alkylamine, in which the amine function may if desired carry one or more further substituents and may be part of a polyamine,

X, each identical or different, is a predominantly sterically stabilizing and/or electrostatically stabilizing substituent,

20

Z, each identical or different, represents where present one or more further substituents, selected from the group consisting of alkyl, alkoxy, and aryloxy groups and halogens, especially chlorine and bromine,

n is an integral number greater than or equal to 1, and

m is an integral number greater than or equal to 0.

Smith, Teresa (ASRC)

From: Green, Anthony (AU1755)
Sent: Thursday, September 09, 2004 5:24 PM
To: STIC-EIC1700
Subject: Structure search 10/759,206

Please do a structure search for the perylene derivative found in claim 1 of 10/759,206, thanks

Anthony Green
Primary Patent Examiner
AU 1755
REMSEN-9C15
(571)272-1367

=> file reg
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L1          1 S E3
L2          STR 198-55-0

      FILE 'REGISTRY'
L3          50 S L2

      FILE 'LREGISTRY'
L4          STR L2
L5          STR L4

      FILE 'REGISTRY'
L6          1 S L5

      FILE 'HCAPLUS'
L7          127 S KONEMAN ?/AU OR KONEMANN ?/AU OR KOENEMAN ?/AU OR KOENE
L8          191 S HEES ?/AU
L9          2193 S PIERRE ?/AU
L10         1 S L7 AND L8 AND L9
            SEL L10 1 RN

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L13         0 S L12

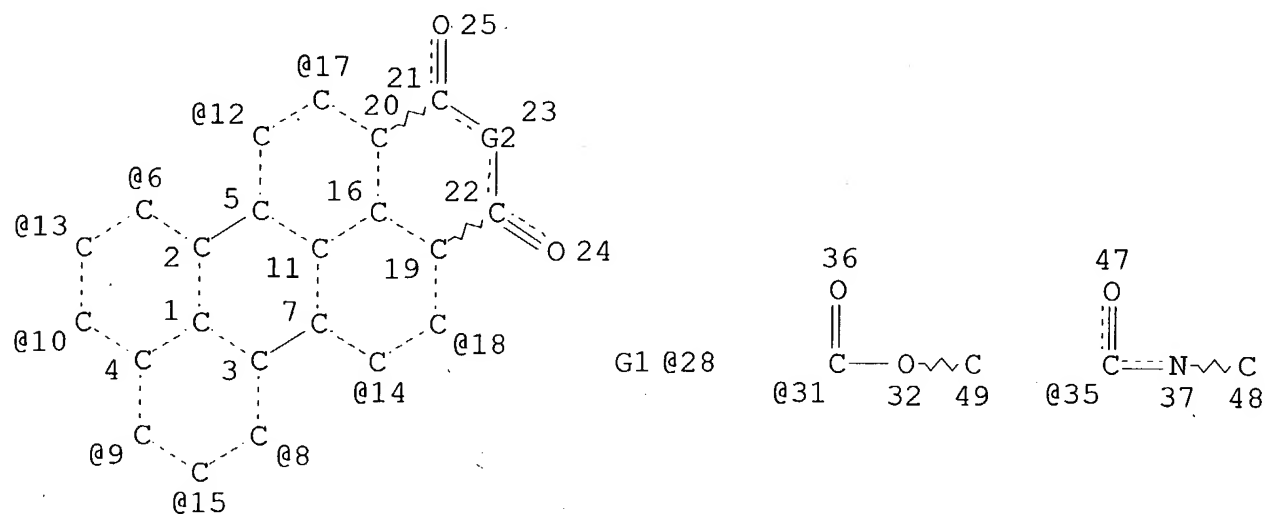
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L14         9 S L12

      FILE 'REGISTRY'
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L5

STR



Page 1-A



Page 1-B

VAR G1=31/35/41/46

VAR G2=O/C/N

VPA 28-18/14/8/15/9/10/13/6/12/17 U

NODE ATTRIBUTES:

| | | | | |
|-------|----|----|----|----|
| NSPEC | IS | RC | AT | 43 |
| NSPEC | IS | RC | AT | 48 |
| NSPEC | IS | RC | AT | 49 |
| NSPEC | IS | RC | AT | 51 |

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC I

NUMBER OF NODES IS 40

STEREO ATTRIBUTES: NONE

L12 17 SEA FILE=REGISTRY SSS FUL L5

100.0% PROCESSED 82 ITERATIONS
 SEARCH TIME: 00.00.01

17 ANSWERS

=> file zcaplus

FILE 'ZCAPLUS'

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L14 ANSWER 1 OF 9 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:631314 ZCAPLUS

DOCUMENT NUMBER: 141:175546

TITLE: Perylene derivatives and their use as dispersants

INVENTOR(S): Konemann, Martin; Hees, Ulrike; Pierre, Valerie

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany

SOURCE: Fr. Demande, 54 pp.

CODEN: FRXXBL

DOCUMENT TYPE: Patent

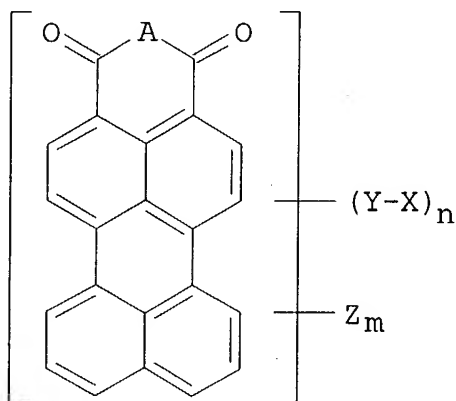
LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. ----- | KIND ---- | DATE ----- | APPLICATION NO. ----- | DATE |
|------------------------|--------------|---------------|--------------------------|-------------------|
| FR 2850651 | A1 | 20040806 | FR 2004-50162 | 200401 28 |
| DE 102004004813 | A1 | 20040812 | DE 2004-102004004813 | 200401 30 |
| PRIORITY APPLN. INFO.: | | | DE 2003-10303916 | A 200301 31 |

GI



AB Perylenes I [A = O, CH₂, or NR₁; R₁ = H, C_{≤22} aryl, C_{≤22} aralkyl, C_{≤22} heteroaryl, C_{≤22} cycloalkyl, or C₁₋₂₂ alkyl; Y = CO₂, CONR₂, SO₃, or SO₂NR₂; R₂ = H, (substituted) C_{≤22} aryl, (substituted) C_{≤22} aralkyl, (substituted) C_{≤22} heteroaryl, (substituted) C_{≤22} cycloalkyl, or (substituted) C₁₋₂₂, X = steric stabilizing groups (such as polymeric) and(or) electrostatic stabilizing groups (such as ammonium groups or protonizable groups); Z = alkyl, alkoxy, aryloxy, or halo; n ≥ 1; m ≥ 0] are manufd. by reaction of appropriate perylene derivs. contg. COCl or SO₂Cl groups to replace these latter groups with the X-Y groups and are useful as dispersants for org. pigments. A typical I was manufd. by heating 16.1 g perylene-3,4-dicarboximide 3 h with 67 g ClSO₃H at 55°, adding 11.0 g thionyl chloride dropwise at 55°, stirring 15 min, and reacting the resulting 9-sulfonyl chloride deriv. with N,N-dimethylaminopropylamine at 0-10° in the presence of Et₃N.

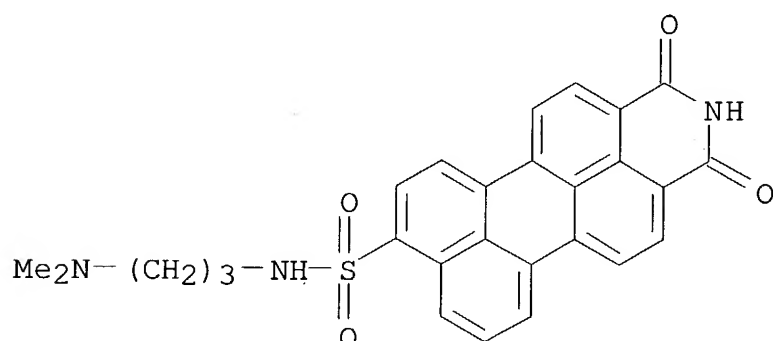
IT 733009-72-8P 733009-73-9P 733009-74-0P

733009-75-1P 733009-77-3P

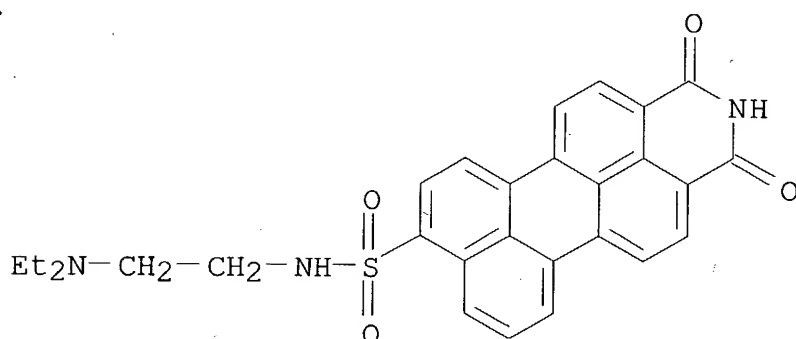
(perylene derivs. having polymeric and(or) ammonium or protonizable groups for dispersants for org. pigments)

RN 733009-72-8 ZCAPLUS

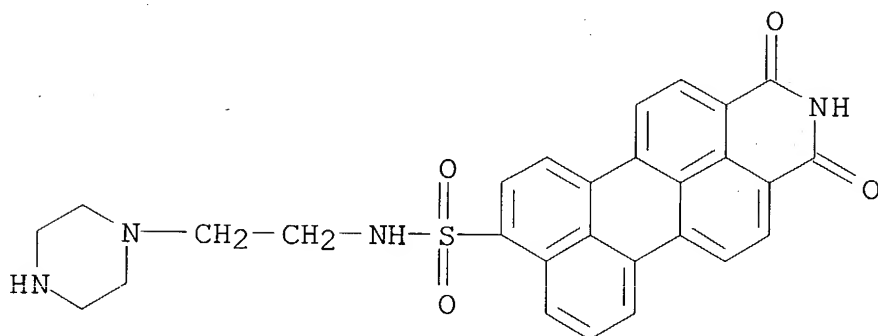
CN INDEX NAME NOT YET ASSIGNED



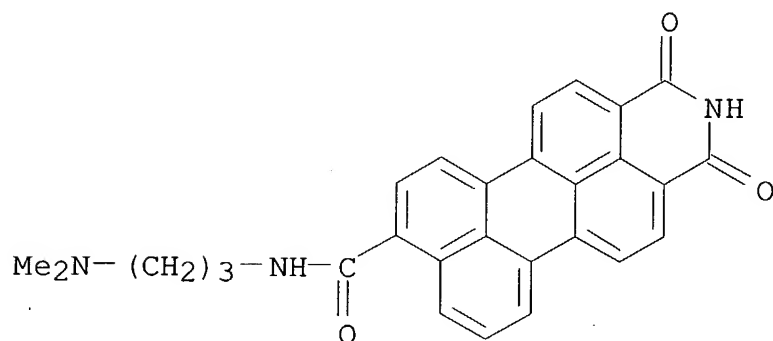
RN 733009-73-9 ZCAPLUS
CN INDEX NAME NOT YET ASSIGNED



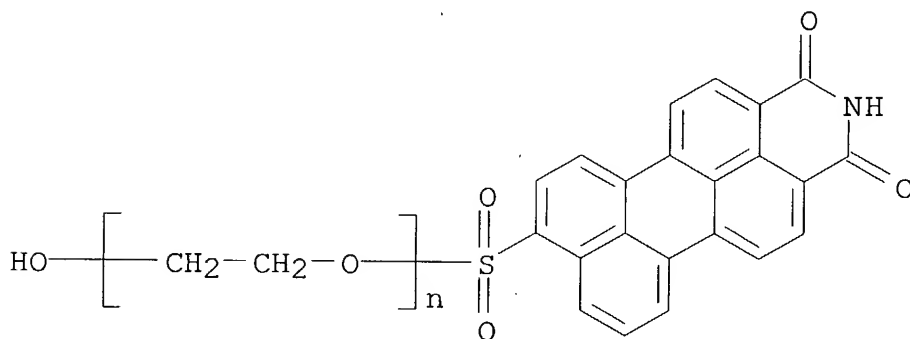
RN 733009-74-0 ZCAPLUS
CN INDEX NAME NOT YET ASSIGNED



RN 733009-75-1 ZCAPLUS
CN INDEX NAME NOT YET ASSIGNED



RN 733009-77-3 ZCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -[(2,3-dihydro-1-oxo-1H-perylo[3,4-cd]pyridin-8-yl)sulfonyl]- ω -hydroxy- (9CI) (CA INDEX NAME)IT 733009-72-8P 733009-73-9P 733009-74-0P
733009-75-1P 733009-77-3P(perylene derivs. having polymeric and(or) ammonium or
protonizable groups for dispersants for org. pigments)

L14 ANSWER 2 OF 9 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:86691 ZCAPLUS

DOCUMENT NUMBER: 138:403066

TITLE: Langmuir films of dichroic dyes with fluorescent
propertiesAUTHOR(S): Biadasz, A.; Hertmanowski, R.; Martynski, T.;
Ingnot, K.; Bauman, D.CORPORATE SOURCE: Faculty of Technical Physics, Poznan University
of Technology, Poznan, 60-965, Pol.

SOURCE: Dyes and Pigments (2003), 56(3), 209-217

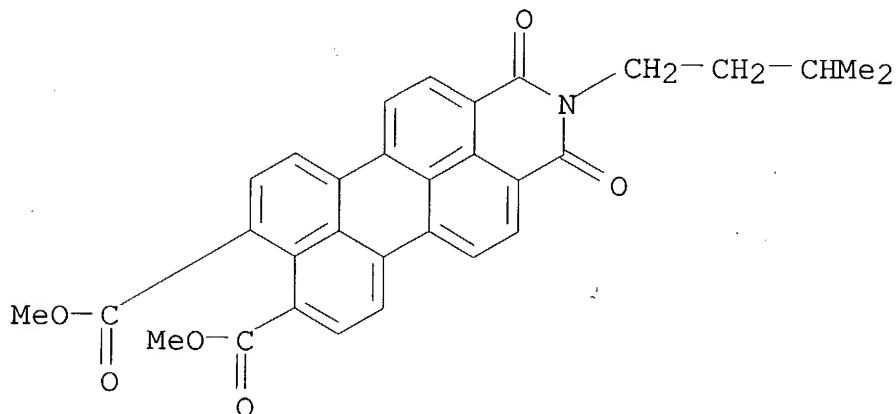
CODEN: DYPIDX; ISSN: 0143-7208

PUBLISHER: Elsevier Science Ltd.

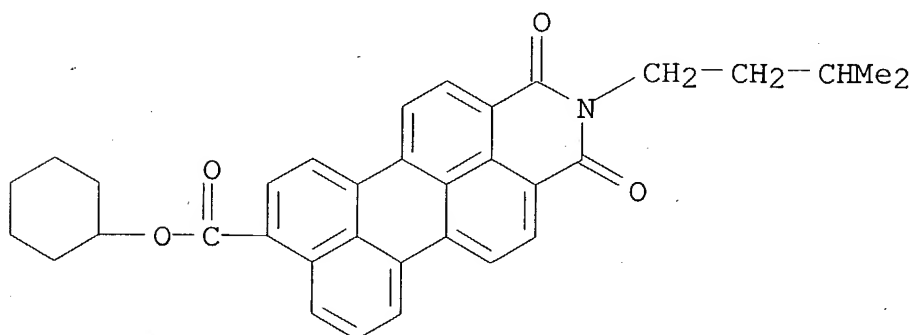
DOCUMENT TYPE: Journal

LANGUAGE: English

- AB Langmuir films of various dyes, namely derivs. of 3,4,9,10-perylenetetracarboxylic acid and 3,4,9-perylenetricarboxylic acid, derivs. of naphthalenedicarboxylic acid, and derivs. of naphthoylenebenzimidazole were investigated. Surface pressure-mean mol. area isotherms were recorded from which the alignment of the mols. in a monomol. layer at the air-water interface was detd. It was found that both the stability and the rigidity of the monolayer are strongly affected by the mol. structure of the side groups substituted on the skeleton of the mol.
- IT 182306-28-1 182306-33-8 220613-93-4
(Langmuir films of dichroic dyes with fluorescent properties)
- RN 182306-28-1 ZCAPLUS
- CN 1H-Perylo[3,4-cd]pyridine-8,9-dicarboxylic acid,
2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, dimethyl ester (9CI) (CA
INDEX NAME)

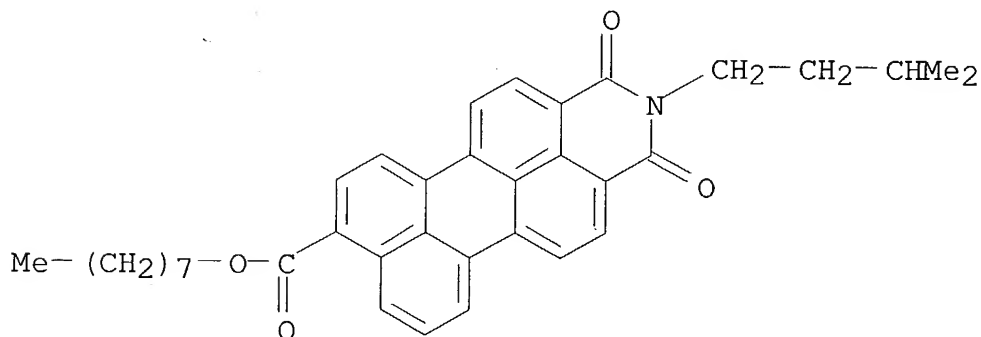


- RN 182306-33-8 ZCAPLUS
- CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, cyclohexyl ester (9CI) (CA INDEX NAME)



RN 220613-93-4 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, octyl ester (9CI) (CA INDEX NAME)



IT 182306-28-1 182306-33-8 220613-93-4

(Langmuir films of dichroic dyes with fluorescent properties)

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L14 ANSWER 3 OF 9 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:403549 ZCAPLUS

DOCUMENT NUMBER: 136:403146

TITLE: Perylene-3,4,9-tricarboxylic acid imides, their
production and their fluorescent dye
applications

INVENTOR(S): Langhals, Heinz; Suessmeier, Frank

PATENT ASSIGNEE(S): Germany

SOURCE: Ger. Offen., 20 pp.

CODEN: GWXXBX

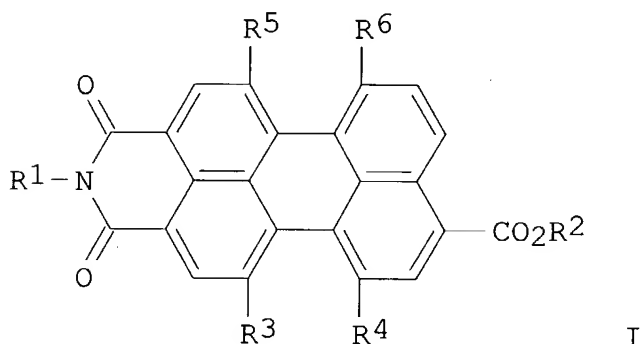
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. ----- | KIND ---- | DATE ----- | APPLICATION NO. ----- | DATE |
|------------------------|--------------|---------------|--------------------------|--------------|
| DE 10038672 | A1 | 20020529 | DE 2000-10038672 | 200008 08 |
| PRIORITY APPLN. INFO.: | | | | 200008 08 |
| | | | | 200008 08 |

OTHER SOURCE(S): CASREACT 136:403146; MARPAT 136:403146
GI



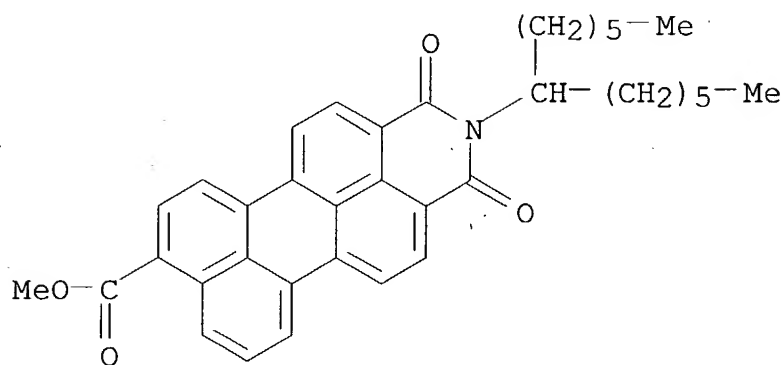
AB 3,4,9-Perylenetricarboxylic acid imides (I; R1-R6 = H, halogen, org. group) are obtained from the corresponding 3,4,9,10-perylenetetracarboxylic acid imide anhydrides in a single-stage synthesis by a partial decarboxylation with copper powder. I are characterized by intense fluorescence, good lightfastness, and easy monofunctionalizability. In an example, 9-carboxy-N-(1-hexylheptyl)-3,4-perylenedicarboximide was prepd. and the carboxy group was modified to give the acid chloride, diethylcarboxamide, and Me ester; all the compds. were red.

IT **334473-82-4P**

(red byproduct; prodn. and derivatization of
carboxyperylenedicarboximide fluorescent dyes)

RN 334473-82-4 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxamide, 2-(1-hexylheptyl)-2,3-dihydro-N,N-dimethyl-1,3-dioxo- (9CI) (CA INDEX NAME)



IT 334473-82-4P

(red byproduct; prodn. and derivatization of
carboxyperylenedicarboximide fluorescent dyes)

IT 334473-77-7P 334473-78-8P

(red dye; prodn. and derivatization of
carboxyperylenedicarboximide fluorescent dyes)

L14 ANSWER 4 OF 9 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:94743 ZCAPLUS

DOCUMENT NUMBER: 134:297153

TITLE: Novel fluorescence labels: the synthesis of
perylene-3,4,9-tricarboxylic imides

AUTHOR(S): Sussmeier, Frank; Langhals, Heinz

CORPORATE SOURCE: Department für Chemie der Universität München,
München, 81377, Germany

SOURCE: European Journal of Organic Chemistry (2001),
(3), 607-610

CODEN: EJOCFK; ISSN: 1434-193X

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:297153

AB Perylene-3,4,9-tricarboxylic imides are prepd. in a one-step
synthesis from perylene-3,4,9,10-tetracarboxylic 3,4-anhydride
9,10-imides by partial decarboxylation with copper powder. The
imides are of interest as labels because of their intense
fluorescence and lightfastness and their easy monofunctionalization.
A derivatization of amines and alcs. with these compds. is
demonstrated.

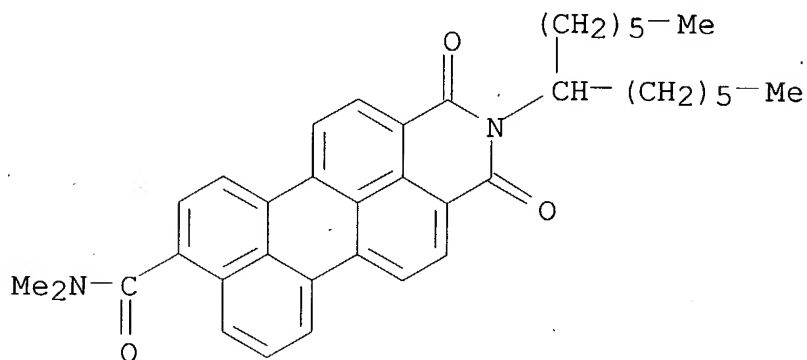
IT 334473-82-4P

(byproduct; prepn. of perylenetricarboxylic imide fluorescence
labels)

RN 334473-82-4 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxamide, 2-(1-hexylheptyl)-2,3-

dihydro-N,N-dimethyl-1,3-dioxo- (9CI) (CA INDEX NAME)

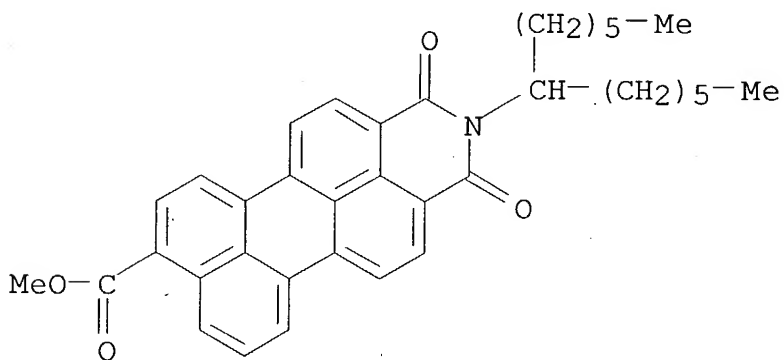


IT 334473-78-8P

(light red fluorescent dye; prepn. of perylenetricarboxylic imide fluorescence labels)

RN 334473-78-8 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2-(1-hexylheptyl)-2,3-dihydro-1,3-dioxo-, methyl ester (9CI) (CA INDEX NAME)

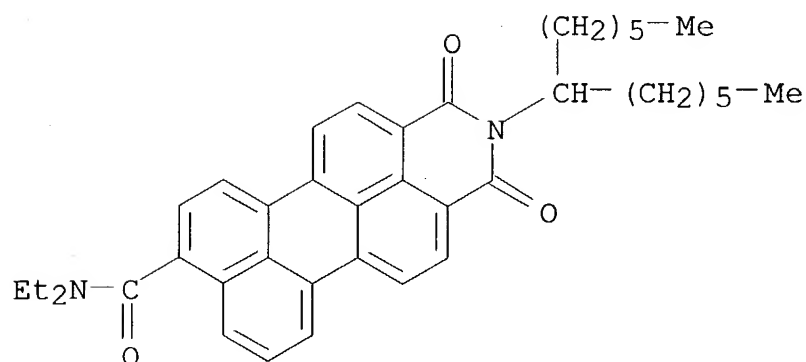


IT 334473-77-7P

(red fluorescent dye; prepn. of perylenetricarboxylic imide fluorescence labels)

RN 334473-77-7 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxamide, N,N-diethyl-2-(1-hexylheptyl)-2,3-dihydro-1,3-dioxo- (9CI) (CA INDEX NAME)



IT 334473-82-4P

(byproduct; prepn. of perylenetricarboxylic imide fluorescence labels)

IT 334473-78-8P

(light red fluorescent dye; prepn. of perylenetricarboxylic imide fluorescence labels)

IT 334473-77-7P

(red fluorescent dye; prepn. of perylenetricarboxylic imide fluorescence labels)

REFERENCE COUNT:

7

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 9 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:685686 ZCAPLUS

DOCUMENT NUMBER: 134:10789

TITLE: Linear dichroism of perylene derivatives in a nematic liquid crystal

AUTHOR(S): Bauman, Danuta; Schulze, Hartmut; Kuball, Hans-Georg

CORPORATE SOURCE: Faculty of Technical Physics, Poznan University of Technology, Poznan, 60-965, Pol.

SOURCE: Liquid Crystals (2000), 27(10), 1357-1367

CODEN: LICRE6; ISSN: 0267-8292

PUBLISHER: Taylor & Francis Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The polarized absorption spectra of derivs. of 3,4,9-perylenetricarboxylic acid and of 3,4,9,10-perylenetetracarboxylic acid dissolved in the nematic liq. crystal mixt. ZLI 1695 were recorded as a function of temp. From these spectra, the directions of the absorption transition moments with respect to the principle axes of the order tensor, and the order parameters S^* and D^* for perylene derivs. were detd. assuming a C_s or C_2 point symmetry group

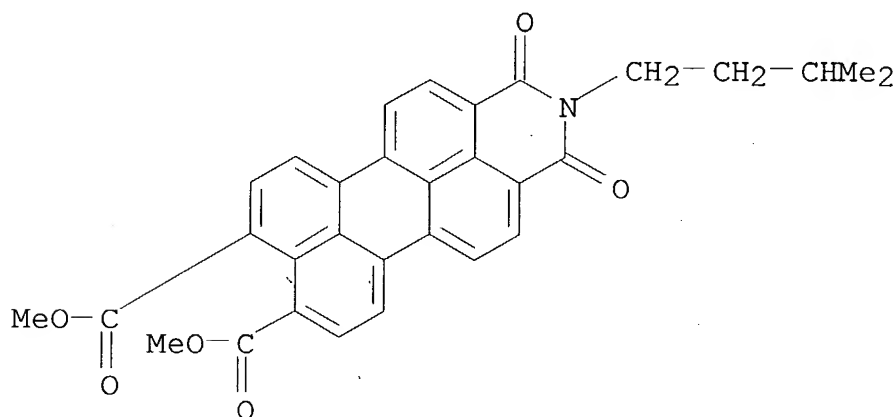
for the dyes mols. From a generalized equation describing properties of anisotropic phases, the conditions necessary to det. a complete set of the order parameters and the pieces of possible information that can be obtained from the polarized optical spectroscopy are discussed.

IT 182306-28-1 182306-30-5 182306-31-6

(linear dichroism of perylene derivs. in a nematic liq. crystal)

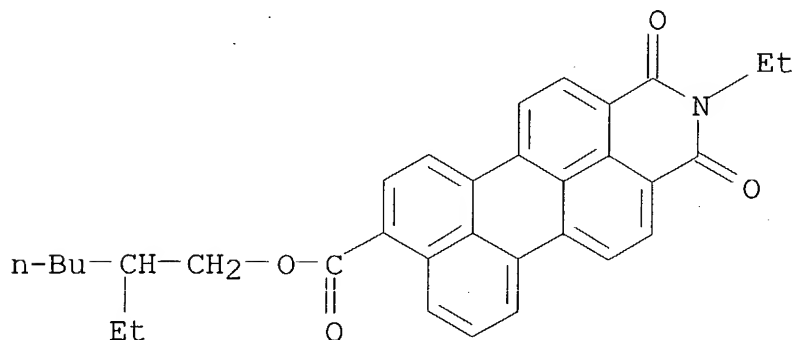
RN 182306-28-1 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8,9-dicarboxylic acid,
2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, dimethyl ester (9CI) (CA
INDEX NAME)



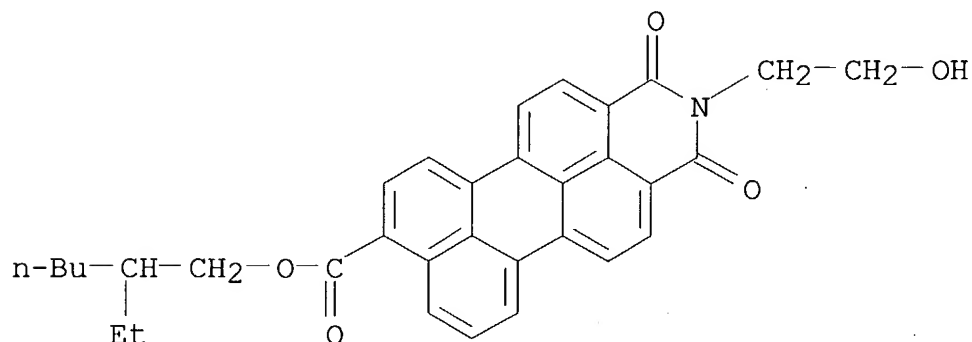
RN 182306-30-5 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2-ethyl-2,3-dihydro-1,3-dioxo-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)



RN 182306-31-6 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2,3-dihydro-2-(2-hydroxyethyl)-1,3-dioxo-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)



IT 182306-28-1 182306-30-5 182306-31-6

(linear dichroism of perylene derivs. in a nematic liq. crystal)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L14 ANSWER 6 OF 9 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:50672 ZCAPLUS

DOCUMENT NUMBER: 130:188696

TITLE: Molecular orientation of perylene-like dyes in
liquid crystal 8OCB

AUTHOR(S): Bauman, Danuta; Mykowska, Ewa; Wolarz, Eryk

CORPORATE SOURCE: Institute of Physics, Poznan University of
Technology, Poznan, 60-965, Pol..

SOURCE: Molecular Crystals and Liquid Crystals Science
and Technology, Section A: Molecular Crystals
and Liquid Crystals (1998), 321, 777-791
CODEN: MCLCE9; ISSN: 1058-725X

PUBLISHER: Gordon & Breach Science Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The polarized absorption and fluorescence spectra of some dichroic
fluorescent dyes (derivs. of 3,4,9-perylenetricarboxylic acid and
3,4,9,10-perylenetetracarboxylic acid) oriented in liq. crystal 8OCB
were recorded as a function of temp. From these spectra the order
parameters <P2> and <P4> and orientational distribution function
were detd. The conclusions about the influence of the mol.
structure of the dyes on their orienting properties in uniaxial liq.
cryst. phases were drawn.

IT 182306-28-1 182306-29-2 182306-30-5

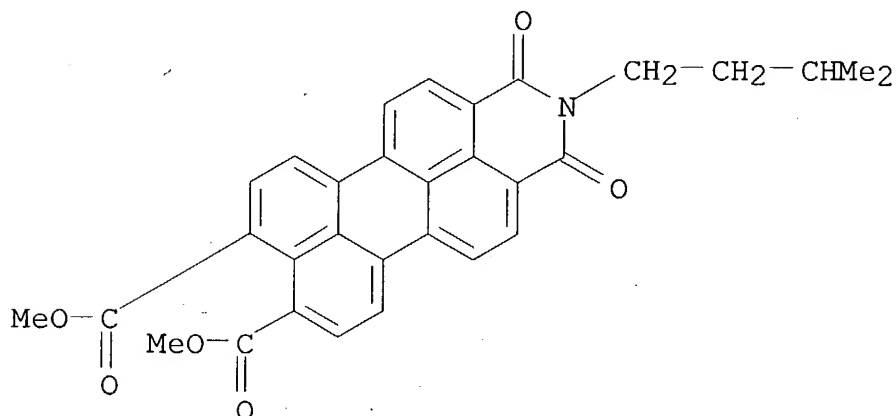
182306-31-6 182306-33-8 220613-93-4

(mol. orientation of perylene-like dyes in liq. crystal 8OCB)

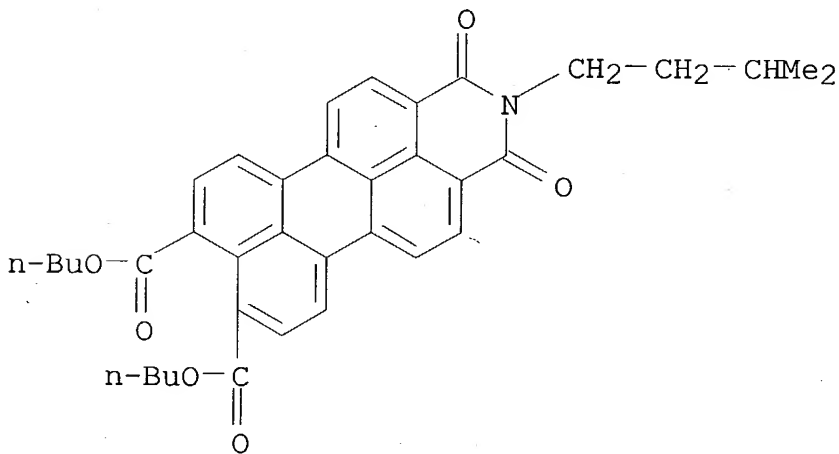
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CN 1H-Perylo[3,4-cd]pyridine-8,9-dicarboxylic acid,

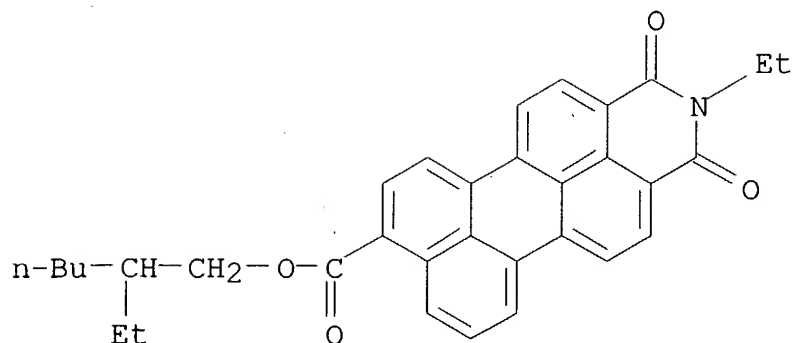
2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, dimethyl ester (9CI) (CA INDEX NAME)



RN 182306-29-2 ZCAPLUS
CN 1H-Perylo[3,4-cd]pyridine-8,9-dicarboxylic acid,
2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, dibutyl ester (9CI) (CA INDEX NAME)

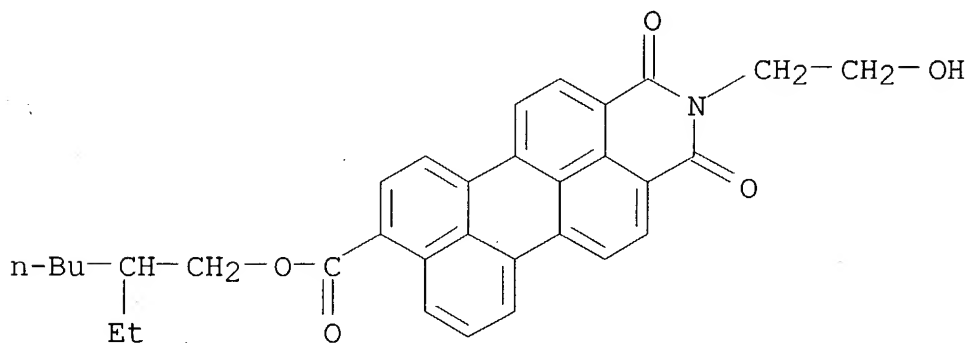


RN 182306-30-5 ZCAPLUS
CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2-ethyl-2,3-dihydro-1,3-dioxo-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)



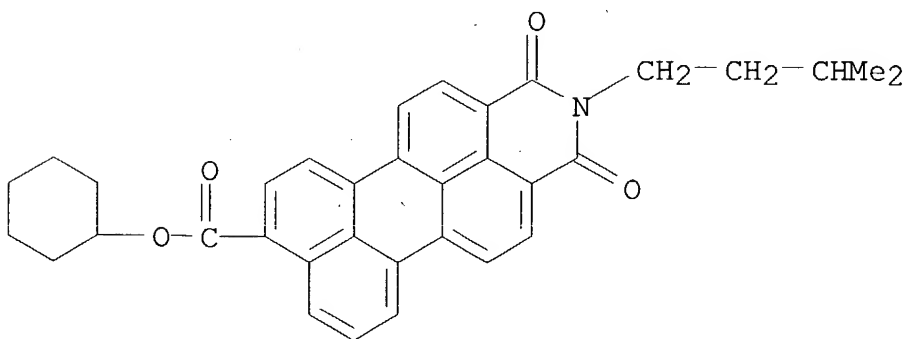
RN 182306-31-6 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2,3-dihydro-2-(2-hydroxyethyl)-1,3-dioxo-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)



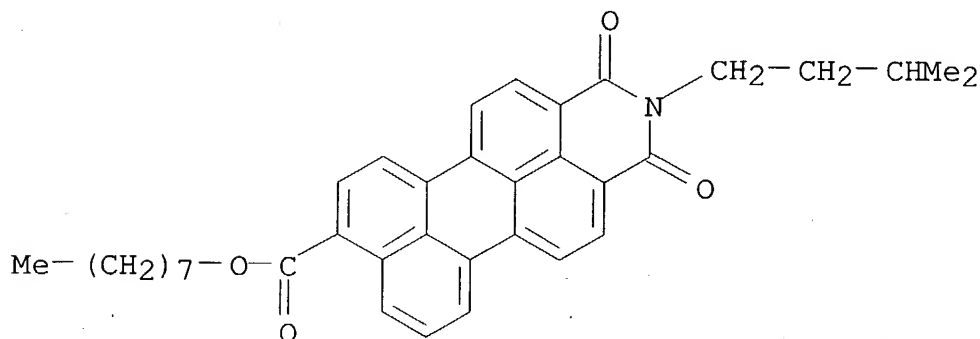
RN 182306-33-8 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, cyclohexyl ester (9CI) (CA INDEX NAME)



RN 220613-93-4 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, octyl ester (9CI) (CA INDEX NAME)



IT 182306-28-1 182306-29-2 182306-30-5

182306-31-6 182306-33-8 220613-93-4

(mol. orientation of perylene-like dyes in liq. crystal 8OCB)

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L14 ANSWER 7 OF 9 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:509224 ZCAPLUS

DOCUMENT NUMBER: 125:250361

TITLE: Perylene-like dyes in liquid crystalline media

AUTHOR(S): Mykowska, Ewa; Bauman, Danuta

CORPORATE SOURCE: Institute Physics, Poznan University Technology,
Poznan, 60-965, Pol.

SOURCE: Zeitschrift fuer Naturforschung, A: Physical
Sciences (1996), 51(7), 843-850

CODEN: ZNASEI; ISSN: 0932-0784

PUBLISHER: Verlag der Zeitschrift fuer Naturforschung

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The spectral and electrooptical properties of some dichroic fluorescent dyes (derivs. of 3,4,9,10-perylenetetracarboxylic acid and of 3,4,9-perylenetricarboxylic acid) in isotropic solvents and nematic liq. crystals were studied. The order parameter of the dyes in the anisotropic matrixes was detd. by means of optical spectroscopy methods. Moreover, the influence of the dye addn. on the nematic-isotropic phase transition temp. of the pure host was investigated. Some of the dyes can be utilized in guest-host liq. crystal display devices.

IT 182306-28-1 182306-29-2 182306-30-5

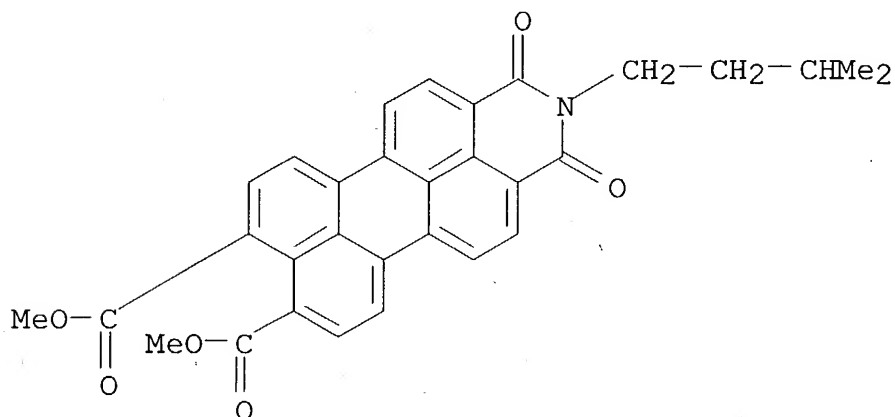
182306-31-6 182306-32-7 182306-33-8

(properties of dichroic fluorescent perylene-like dyes in liq.

cryst. media)

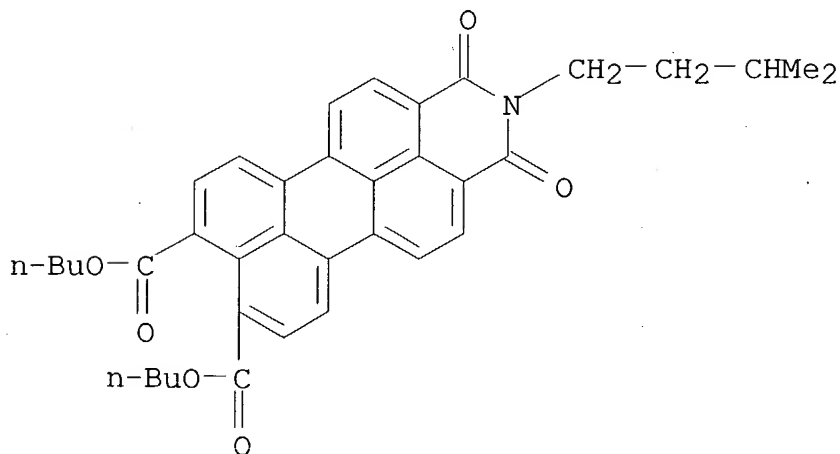
RN 182306-28-1 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8,9-dicarboxylic acid,
2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, dimethyl ester (9CI) (CA
INDEX NAME)



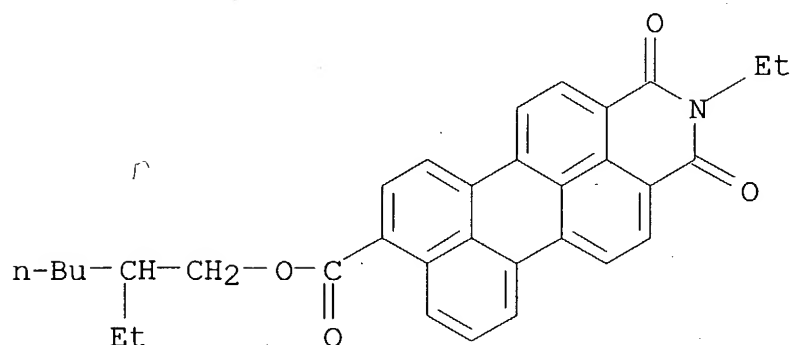
RN 182306-29-2 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8,9-dicarboxylic acid,
2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, dibutyl ester (9CI) (CA
INDEX NAME)



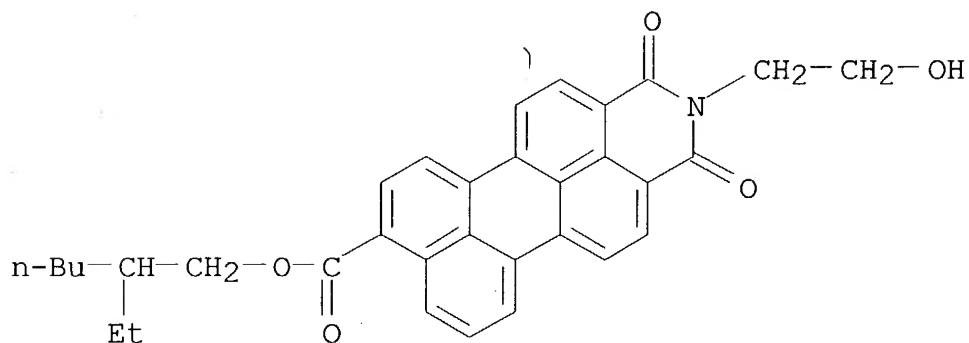
RN 182306-30-5 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2-ethyl-2,3-dihydro-1,3-
dioxo-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)



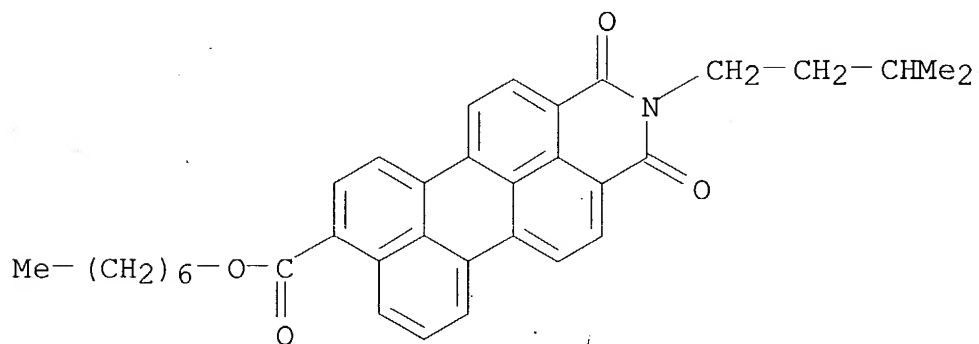
RN 182306-31-6 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2,3-dihydro-2-(2-hydroxyethyl)-1,3-dioxo-, 2-ethylhexyl ester (9CI) (CA INDEX NAME)



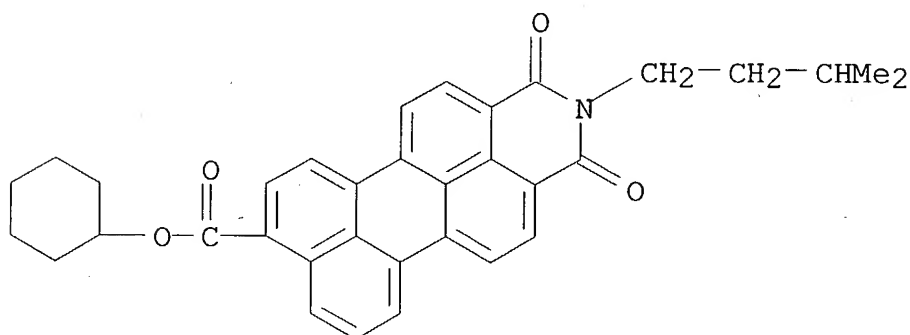
RN 182306-32-7 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, heptyl ester (9CI) (CA INDEX NAME)



RN 182306-33-8 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8-carboxylic acid, 2,3-dihydro-2-(3-methylbutyl)-1,3-dioxo-, cyclohexyl ester (9CI) (CA INDEX NAME)



IT 182306-28-1 182306-29-2 182306-30-5
 182306-31-6 182306-32-7 182306-33-8
 (properties of dichroic fluorescent perylene-like dyes in liq.
 cryst. media)

L14 ANSWER 8 OF 9 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:708357 ZCAPLUS

DOCUMENT NUMBER: 123:86070

TITLE: Pigment preparations with perylene derivatives
 as dispersing agents

INVENTOR(S): Hetzenegger, Josef; Henning, Georg; Erk, Peter

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------|------|----------|-----------------|--------------|
| EP 636666 | A2 | 19950201 | EP 1994-111339 | 199407 21 |
| EP 636666 | A3 | 19960306 | | |
| EP 636666 | B1 | 20000524 | | |
| R: CH, DE, DK, FR, GB, LI | | | | |
| DE 4325247 | A1 | 19950202 | DE 1993-4325247 | 199307 28 |
| US 5472494 | A | 19951205 | US 1994-266383 | |

JP 07070461

A2

19950314

JP 1994-175678

199406
27199407
27

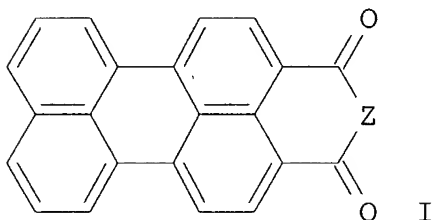
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DE 1993-4325247

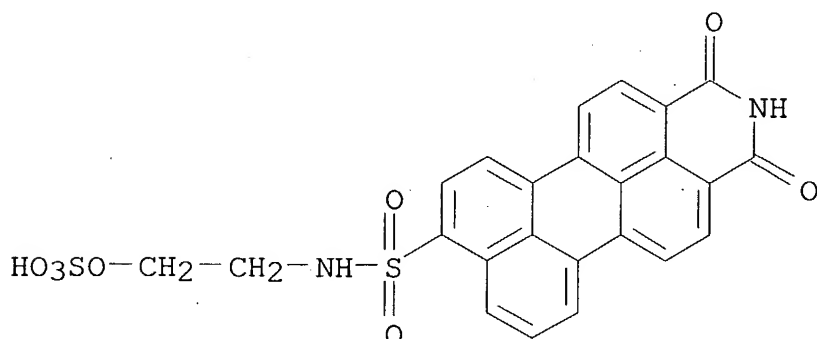
A

199307
28OTHER SOURCE(S):
GI

MARPAT 123:86070



- AB The perylene derivs. I (Z = O, CH₂, imino group) bearing 0-4 sulfo groups and 0 or 1 carboxy group are good dispersing agents for pigments. The use of N-methyl-3,4-perylenedicarboximide-9-sulfonic acid (prepd. from N,N'-dimethyl-3,4,9,10-tetracarboxylicdiimide via the monoimide) as a dispersing agent gave dispersions of pigments (e.g., C.I. Pigment Red 179) with good rheol. and tinctorial strength.
- IT **165534-04-3P**
(pigment prepns. with perylene derivs. as dispersing agents)
- RN 165534-04-3 ZCAPLUS
- CN 1H-Perylo[3,4-cd]pyridine-8-sulfonamide, 2,3-dihydro-1,3-dioxo-N-[2-(sulfooxy)ethyl]- (9CI) (CA INDEX NAME)



IT 165534-04-3P

(pigment prepn. with perylene derivs. as dispersing agents)

L14 ANSWER 9 OF 9 ZCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:425304 ZCAPLUS

DOCUMENT NUMBER: 122:216547

TITLE: Perylenamidine-imide dyes

AUTHOR(S): Langhals, Heinz; Sprener, Sylvia; Brandherm, Marie-Theres

CORPORATE SOURCE: Institut Organische Chemie, Universitaet Muenchen, Muenchen, D-80333, Germany

SOURCE: Liebigs Annalen (1995), (3), 481-6

CODEN: LANAEM; ISSN: 0947-3440

PUBLISHER: VCH

DOCUMENT TYPE: Journal

LANGUAGE: English

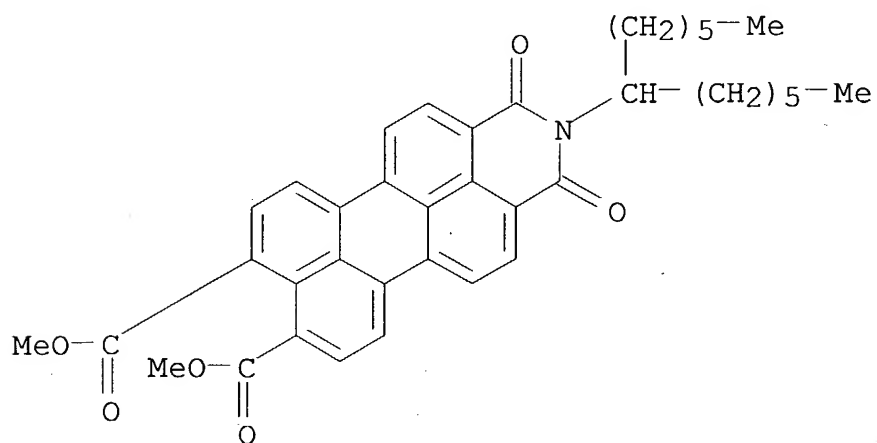
AB Perylene-3,4:9,10-tetracarboxylic acid 3,4-anhydride-9,10-imides are condensed with primary diamines to a no. of new basic chromophores with amidine-imide structures. Lightfast dyes are obtained which exhibit a strong fluorescence in soln. The absorption and fluorescence spectra of the title compds. are bathochromically shifted compared to those of the perylene dyes.

IT 162109-64-0P

(prepn. and fluorescence of perylenamidine-imide dyes)

RN 162109-64-0 ZCAPLUS

CN 1H-Perylo[3,4-cd]pyridine-8,9-dicarboxylic acid,
2-(1-hexylheptyl)-2,3-dihydro-1,3-dioxo-, dimethyl ester (9CI) (CA
INDEX NAME)



IT 162109-64-0P
(prepn. and fluorescence of perylenamidine-imide dyes)